# ABSTRACT

A method is disclosed for allocating processing resources, such as instruction execution which can be measured in MIPs or memory capacity, or other resources of a processor itself or resources used in the process of performing operations, such as memory resources, busses, drivers and the like, to functions in a queue waiting to be executed. This method includes the steps of determining the amount of processor resources available to be assigned, determining an estimate of the amount of resources needed for each function waiting in the queue to execute, and allocating the available resources to the functions using a hierarchical priority scheme. The hierarchical priority scheme assigns priority based on the environmental conditions, the achieved performance, and the amount of resource recently consumed by the function.

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